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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.		
09/750,125	12/29/2000	Mitsuhiro Kanada	Q62454	6746		
65565 SUGHRUE-26	7590 07/20/2007	EXAMINER				
2100 PENNSYLVANIA AVE. NW			CHANG, V	CHANG, VICTOR S		
WASHINGTO	N, DC 20037-3213		ART UNIT	PAPER NUMBER		
			1771			
			MAIL DATE	DELIVERY MODE		
			07/20/2007	PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

		Application	n No.	Applicant(s)	
Office Action Comments		09/750,125		KANADA ET AL.	
	Office Action Summary	Examiner		Art Unit	
		Victor S. Cl	_	1771	
Period fo	The MAILING DATE of this communication app or Reply	pears on the	cover sheet with the co	orrespondence add	dress
WHIC - Exter after - If NC - Failu Any	ORTENED STATUTORY PERIOD FOR REPLY CHEVER IS LONGER, FROM THE MAILING DANSIONS of time may be available under the provisions of 37 CFR 1.13 SIX (6) MONTHS from the mailing date of this communication. Period for reply is specified above, the maximum statutory period were to reply within the set or extended period for reply will, by statute, reply received by the Office later than three months after the mailing and patent term adjustment. See 37 CFR 1.704(b).	ATE OF THI 36(a). In no ever will apply and will b. cause the applic	S COMMUNICATION tt, however, may a reply be time expire SIX (6) MONTHS from to cation to become ABANDONED	l. ely filed he mailing date of this cor	
Status					
2a)⊠	Responsive to communication(s) filed on 16 July This action is FINAL . 2b) This Since this application is in condition for allowant closed in accordance with the practice under E	action is no	or formal matters, pro		merits is
Dispositi	on of Claims				
5)□ 6)⊠ 7)□	Claim(s) 1-10,16 and 17 is/are pending in the at 4a) Of the above claim(s) is/are withdraw Claim(s) is/are allowed. Claim(s) 1-10, 16 and 17 is/are rejected. Claim(s) is/are objected to. Claim(s) are subject to restriction and/or	wn from con			
Applicati	on Papers			•	
10)□	The specification is objected to by the Examiner The drawing(s) filed on is/are: a) acce Applicant may not request that any objection to the o Replacement drawing sheet(s) including the correcti The oath or declaration is objected to by the Ex-	epted or b) drawing(s) be tion is required	held in abeyance. See	37 CFR 1.85(a). ected to. See 37 CF	
Priority u	ınder 35 U.S.C. § 119				
12) <u></u> a)[Acknowledgment is made of a claim for foreign All b) Some * c) None of: 1. Certified copies of the priority documents 2. Certified copies of the priority documents 3. Copies of the certified copies of the prioric application from the International Bureau see the attached detailed Office action for a list of	s have been s have been rity documer u (PCT Rule	received. received in Applications have been received 17.2(a)).	on No d in this National S	Stage
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2) Notic 3) Inform	e of References Cited (PTO-892) e of Draftsperson's Patent Drawing Review (PTO-948) nation Disclosure Statement(s) (PTO/SB/08) r No(s)/Mail Date		4) Interview Summary (Paper No(s)/Mail Dat 5) Notice of Informal Pa 6) Other:	e	

DETAILED ACTION

Introduction

- 1. Applicants' remarks filed on 7/16/2007 have been entered. Claims 1-10, 16 and 17 are active.
- 2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Rejections Based on Prior Art

3. Claims 1, 3-10 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 99/47573 in view of Kurisu et al. [US 6254847].

WO '573 relates to a low-density microcellular thermoplastic elastomeric foams with closed cells. The foam is made using supercritical fluid CO₂ as the blowing agent [abstract]. The polymer and the blowing agent are mixed in the melt stage in a tandem extruder under high temperature and pressure, subsequently the temperature and pressure are reduced to initiate foaming [page 3, lines 9-17]. Additional components of the foams include fire (flame) retardants [page 3, line 7]. Depends on pressure drop rates between 0.1 to 15 GPa, thermoplastic foams having various densities between 6 to 14 pcf, and uniform cell sizes of about 100 to 150 microns are obtained [page 4, lines 8-30]. Various foam properties such as the density, cell structure and size, compression set, etc. may be adjusted by varying the foaming conditions [page 5, lines 23-26]. The optimal compression set is less than about 30% [page 5, line 30]. Table 1 shows suitable foam materials include SANTOPRENE®, SEBS resin, polyethylene, etc. Further, WO

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'573 expressly teaches that SANTOPRENE® is a blend of polypropylene and ethylene propylene (EPDM) copolymer [page 3, lines 2-5].

For claims 1, 3-10 and 17, WO '573 is silent about the use of composite metal oxide MgO·ZnO·H₂O or MgO·NiO·H₂O as flame retardant in the thermoplastic foam. However, prior art Kurisu relates to a metal oxide solid solution (hydrated composite metal oxide) in the form crystal powder by the following formula:

 $Mg_{1-x}M^{2+}_{x}(OH)_{2}$

wherein M^{2+} denotes at least one divalent metal ion selected from Ni^{2+} , Zn^{2+} , etc., and x denotes a number in the range of $0.01 \le x < 0.5$

The crystal improves fluidity, processability and the like when the solid solutions are kneaded into resins for use as flame retardant additives [abstract; col. 1, line 61 through col. 2. line 1; col. 3, lines 33-34]. It would have been obvious to one of ordinary skill in the art to select and modify the thermoplastic foam resin of WO '573 with a suitable hydrated composite metal oxide such as MgO·ZnO·H₂O or MgO·NiO·H₂O, motivated by the desire to improve the flame retardant property of the thermoplastic foams with improved processability.

4. Claims 2 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 99/47573 in view of Kurisu et al. [US 6254847] and Applicants' admitted prior art JP-A-322168.

The teachings of WO '573 and Kurisu are again relied upon as set forth above.

For claim 2, applicants have admitted that it is known art to impregnate a pre-formed unexpanded thermoplastic molding, as taught by the prior art JP-A-322168 [specification, page 4, paragraph 2].

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For claim 16, applicants have admitted that it is well known that expanded materials are used in various pads for the purposes of soundproofing, cushioning, etc. in electronic appliances [specification, page 2, second paragraph].

Response to Argument

5. Applicants argue at Remarks pages 2-3 that the relied upon prior art is silent about the effect owing to the use of MgO·ZnO·H₂O or MgO·NiO·H₂O, therefore the examiner's assertion amounts to improper hindsight. However, the fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).

Conclusion

6. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Victor S. Chang whose telephone number is 571-272-1474. The examiner can normally be reached on 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel H. Morris can be reached on 571-272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Victor S Chang

Primary Examiner

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